

RESEARCH ARTICLE

Exploring the educational value of a continuous glucose monitoring wear experience in pharmacy students: A qualitative study

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Abstract

Background: Despite continuous glucose monitoring (CGM) being the standard of treatment for type 1 and type 2 diabetes, patient uptake has been reported to under 50%. Clinician awareness and identification of barriers can help reduce diabetes-related complications; however, less than half of pharmacy schools provide CGM education. The objective is to explore pharmacy students' perceptions of a CGM wear experience and their self-reported awareness of patient challenges, device usability, and empathy-related considerations. **Methods:** A CGM student-wear experience was incorporated into two sessions of an elective advanced pharmacotherapy course for third-year pharmacy students. The experience was divided into three parts over two class sessions, including a one-week CGM student-wear experience. Reflections were collected through an anonymous questionnaire and a recorded focus group. A thematic approach guided analysis, and reviewers reached consensus on themes. **Results:** Seventeen students participated; 70.6% had prior experience with traditional finger-stick blood glucose monitoring, while only one had CGM experience. Students described four areas of awareness: empathy for patient experiences, recognition of CGM as a self-management tool, perceived value of hands-on learning, and anticipated barriers. **Conclusion:** Students perceived greater awareness of CGM-related challenges and patient experiences, suggesting that application-based activities can support patient-centred learning in pharmacy curricula.

Introduction

The benefits of continuous glucose monitors (CGM) in type 1 and type 2 diabetes are well established (Lanning *et al.*, 2020). However, as of 2016-2019 data, patient uptake of CGM use is reported in less than 50% of patients (Lacy *et al.*, 2024). Barriers for patient uptake and adherence include difficulty in obtaining and using the device, trust in the results, and device malfunction (Park *et al.*, 2023). Clinician perspectives highlight concerns of device cost and patient resistance to learning new technology (Lanning *et al.*, 2020). Clinician awareness and identification of barriers may empower practitioners to address these barriers, which impact

patient uptake and adherence, ideally reducing the risks of diabetes-related complications.

As medication experts, pharmacists are often the first healthcare professionals that patients turn to due to accessibility and the ease of obtaining care. This is exemplified by the widespread accessibility of CGM, an advanced diabetes technology, at community pharmacies, where patients often rely on pharmacists for comprehensive education and guidance on optimal device utilisation. At the forefront of patient-directed care, pharmacists should be equipped with the proper knowledge and resources to deliver satisfactory patient education and medication interventions related to many disease states, like diabetes (Sherrill *et al.*, 2022). This is especially important when reducing the risk of

complications or progression of disease. In a cohort study, the pharmacist-driven implementation of CGM in patients with uncontrolled type 2 diabetes demonstrated a statistically significant reduction in A1C and increased pharmacological interventions. This approach led to improved clinical outcomes in patients managed by pharmacists, compared to the standard care provided by physicians (Sherrill *et al.*, 2020).

Current literature indicates that not all pharmacists are taught how to use CGMs in the didactic and experiential curricula (Knezevich *et al.*, 2022; Sherrill *et al.*, 2022). In a survey of all 139 United States Accredited Doctor of Pharmacy programs (response rate 41%), 51 programs indicated the provision of some form of CGM education for a median of 1.0 hour over the course of the entire pharmacy curriculum. Sixteen programs provide “hands-on” CGM experience, although “hands-on” was not defined (Knezevich *et al.*, 2022). According to the 2023 ACCP Toolkit, type 2 diabetes mellitus is indicated as a “tier-one” disease state, and type 1 diabetes is indicated as a “tier-two” disease state. “Tier-one” indicates that pharmacists should graduate being “practice-ready” to provide all aspects of patient-centred, collaborative care for diabetes patients. “Tier-two” indicates that students should receive foundational education and training on this condition, but some additional knowledge and/or training will be required after graduation to prepare them to be practice-ready pharmacists providing collaborative, person-centred care (Kolanczyk *et al.*, 2024). More recently, American Diabetes Association (ADA) Standards of Care Guidelines state that CGM use is standard of care for patients to safely attain treatment goals and that it should be used at onset of diagnosis (Schwinghammer *et al.*, 2016; ElSayed *et al.*, 2023; American Diabetes Association Professional Practice Committee, 2024). It can be inferred that CGM education should be a part of pharmacy schools’ curricula.

In addition to clinical applications, patient perspectives and barriers are important elements of pharmacist education. A literature search of PubMed using search terms “pharmacy students” AND “diabetes” AND “empathy” resulted in three publications where students test their own blood glucose as a simulated patient activity (Whitley, 2012; Kerr *et al.*, 2015; Parker *et al.*, 2019). To our knowledge, our project is the first using CGM in a didactic course with the goal of teaching empathy. The purpose of this study was to examine the

impact of a hands-on educational CGM wear experience on pharmacy students’ empathy toward patients with diabetes mellitus and their self-perceived knowledge of continuous glucose monitoring.

Methods

Study design

A continuous glucose monitoring (CGM) student-wear experience was incorporated into two sessions of an elective advanced pharmacotherapy course for third-year professional (P3) pharmacy students. The course met once per week for three consecutive hours. A medical education grant application for no-cost continuous glucose monitor sensors was submitted by two clinical pharmacy faculty members teaching the course, along with a collaborating physician. All seventeen students enrolled in the elective course voluntarily agreed to participate in the CGM experience; students were informed they could decline or withdraw at any time. Students were required to complete both a consent form and a recording permission form prior to sensor placement. The University required the collection of acknowledgement and permission forms from all participants. This study was reviewed by the University’s Institutional Review Board (IRB) and was determined to be exempt from full review, as it involved minimal risk and focused on educational practices.

The experience was divided into three parts over an eight-day period across two class sessions: didactic instruction, a wear experience, and a reflective exercise (Table I). In-class session #1 included both the didactic instruction (Part 1) and the sensor application components (Part 2). The didactic portion was led by a Medical Science Liaison (MSL) from the device manufacturer. Students had the option to apply the sensor either at home, using detailed written instructions, or in class, under the guidance of a PGY1 pharmacy practice resident and three pharmacy faculty members. The CGM student-wear experience lasted up to eight days, unless the sensor fell off earlier (Part 2). In-class session #2 involved sensor removal (Part 2), questionnaire completion (Part 3), and a focus group discussion (Part 3). A PGY1 pharmacy resident and course faculty facilitated the debrief session on student experiences and perspectives.

Table I: Detailed timeline of methodology

Day number	Location	Activity	Description
Part 1			
1	In-class (session #1)	Didactic lecture	Guest speaker-led presentation on CGM principles, data interpretation, and the benefits and limitations of their use in clinical practice (60 minutes).
Part 2			
1	In-class ^a (session #1)	Sensor application	Students applied the sensors, downloaded the appropriate smartphone application, and paired their devices with their phones.
1-8	Outside class	CGM wear experience	Students wore sensors for up to 8 days.
8	In-class (session #2)	Sensor removal	Follow-up class where students removed the sensors.
Part 3			
8	In-class (session #2)	Reflection	Students completed an anonymous online questionnaire, followed by participation in a recorded 30-minute debrief session conducted in focus group format.

^aStudents were given the option to complete at home.

Data collection tools

Data was collected through a questionnaire and the recorded debrief session. The questionnaire, developed by two pharmacy faculty members using previously published instruments used in educational and empathy-related studies, included items on demographics, prior CGM experience, device wear duration, and reflection questions related to patient experiences and empathy (Table II) (Keating *et al.*, 2019; Sanford *et al.*, 2020). The questionnaire was administered via quick response (QR) code anonymously using Microsoft Forms. Students completed the questionnaire at the start of Part 3 during in-class session #2. The debrief session included open-ended questions and prompts to encourage discussion on self-awareness, hesitations, challenges, lifestyle impact, ease of use, and empathy (Table II).

Data analysis

A student pharmacist transcribed verbatim the recorded debrief session, compiled questionnaire responses, and organised the material into a unified dataset for analysis. Following independent review of the unified dataset, thematic analysis was conducted separately by the student pharmacist, three clinical pharmacy faculty members, and a PGY1 pharmacy practice resident. Each member of the analysis team read the student responses in full, noted recurring phrases or ideas, and created initial codes that reflected meaningful statements made by students. These preliminary codes were then compared across team members to identify areas of similarity and difference. Commonly identified themes were consolidated, and any discrepancies were systematically discussed among the team until majority

consensus was achieved. After themes were finalised, representative quotations were chosen to illustrate each theme and demonstrate how student reflections supported the analytic decisions. Quantitative questionnaire items were analysed using descriptive statistics.

Table II: Questions and prompts to data collection

Questionnaire: Demographics
<ul style="list-style-type: none"> • What academic year are you currently enrolled in? • What is your age in years? • Gender- How do you identify? • Do you have prior experience with CGM? • Where were you when you applied the sensor? • For how many days did you wear the sensor?
Questionnaire: Reflection questions
<ul style="list-style-type: none"> • If you did not wear the sensor, why not? • If you are still wearing the sensor, are you removing it today or do you plan to wear it for 14 days? • If you wore the sensor for less than 7 days, why did you remove the sensor early? • What are some of the most important things you learned from wearing the sensor? • What are benefits (or positives) you learned from wearing the sensor? • What were the challenges of wearing the sensor for one week? • What are your thoughts on what patients go through while wearing CGM?
Debrief session: Prompts to encourage discussion
<ul style="list-style-type: none"> • What did you think of the activity? • What are some of the most important things you learned from wearing the device for a week?

Questionnaire: Demographics
<ul style="list-style-type: none"> • What positive experiences did you encounter from wearing the device? • What challenges did you encounter? • What are your thoughts on what patients go through while wearing a CGM device? • How did wearing the sensor influence your nutrition? • What surprised you the most? • How did wearing the sensor influence what type of clothing you wore, or what activities you participated in? • What changed about your thoughts on what patients go through with diabetes? • How did this activity change how you would approach or talk to a patient? • Do you think this activity should be continued with pharmacy students? • Do you think this activity should be offered to students of other health professions?

Results

Of the seventeen students enrolled in the elective course, seventeen participated in the CGM experience, yielding a participation rate of 100%, with 2 applying the sensor at home. Majority of the students were female (64.7%), and the median age was 25 years. All participants (100%) completed the questionnaire and participated in the focus group session. The students wore the sensor for a median of six days. While most students (70.6%) had prior experience with traditional blood glucose monitoring, only one had experience with CGMs. Detailed characteristics of this cohort are provided in Table III. Four key themes emerged following the completion of the questionnaire and debrief: the role of empathy in shaping well-rounded healthcare providers, the recognition of CGM as a tool for patient empowerment, the complementary relationship between application-based learning and didactic curriculum, and the identification of potential barriers to CGM adoption by patients (Table IV).

Table III: Characteristics of P3 pharmacy students in elective course (n = 17)

Characteristics	Descriptions	
Age in years	Median (IQR)	25 (24-27)
Sex, n (%)	Female	11 (64.7)
	Male	6 (35.3)
Questionnaire responses, n (%)		17 (100)
Focus group participants, n (%)		17 (100)
Sensor wear time in days	Median (IQR)	6 (5-7)
Prior CGM experience, n (%)		1 (5.9)
Prior BG monitor experience, n (%)		12 (70.6)

Abbreviation: IQR, interquartile range; CGM, continuous glucose monitor; BG, blood glucose.

Table IV: Four key themes identified from questionnaire and debrief

Theme	Descriptions
<i>Empathy in healthcare</i>	The role of empathy in shaping well-rounded healthcare providers.
<i>Patient empowerment</i>	Recognition of CGM as a tool for patient empowerment.
<i>Application-based learning</i>	The complementary relationship between application-based learning and the didactic curriculum.
<i>Barriers to CGM adoption</i>	Identification of potential barriers to CGM adoption by patients.

Theme 1: Empathising with patient experiences creates well-rounded healthcare providers

Multiple students expressed that their previous lack of confidence in using CGM and interpreting its data had been a challenge. One student stated, “...before this I never really...paid attention to them...so I would never help them. But now I think it would be easier to help them and be confident in what I’m doing.” However,

after gaining experience with wearing CGM, they felt more inclined to act when providing care. For example, students reported their improved ability to counsel patients as a future pharmacist: “*Understanding what patients go through and learning how to wear [a CGM] will help when counseling patients.*” One student mentioned that they “*thought of how it may take time out of their day to scan their device, deal with alarms, and deal with the sensor falling off early and causing*

issues.” Another student expressed empathy for the challenges patients face beyond CGM application, recognising the difficulty of always being mindful of the device: *“You would have to constantly check your glucose levels, have your phone around you at all times, and make sure you don’t bump your arm or submerge in water for too long.”*

Theme 2: Awareness of CGM as a patient empowerment tool

This theme emerged as students commented on how their eating habits influenced their blood glucose trends. They noted an increased awareness of how certain foods affected their blood sugar levels, leading to a greater inclination to avoid specific foods or make more informed dietary choices to prevent spikes or drops in blood glucose. For example, one student stated, *“I noticed that some of my habits changed while wearing the CGM, for instance, I would try to eat less rice or foods with only carbs because it would raise my BG.”* This awareness translated into students recognising that understanding the relationship between food and blood glucose levels can empower patients to make informed dietary decisions, helping the patient maintain trends within the goals set by their healthcare provider. One student reinforced this idea by stating, *“Using what we see in our trends can help guide our own lifestyle adjustments.”* This theme also extended to students, highlighting the utility of CGM in alerting patients to hypoglycemia. As one student explained, *“The app can tell [patients] when they’re trending low, so they can treat themselves before... a life-threatening event.”* These responses illustrate how real-time glucose trends displayed on easily accessible devices foster self-efficacy in patients, motivating them to sustain healthy lifestyle modifications.

Theme 3: Application-based learning complements didactic curriculum

Many student responses conveyed an appreciation for the value of hands-on learning alongside the didactic portion of the experience. This sentiment is reflected in one student's comment: *“...gaining a better understanding for people who routinely wear them. I gained an appreciation for those who seek to advance their health by choosing to be on top of their disease state(s).”* Students noted that actively engaging with the CGM device enhanced their understanding in ways that lectures or readings alone could not. One student highlighted this by stating that the wear experience *“sheds light onto the real patient experience rather than us... relaying facts to the patient. We actually experienced it ourselves.”* This hands-on approach

allowed students to better appreciate the practical challenges faced by patients with diabetes.

Theme 4: Anticipating barriers to patient use

This theme focused on students’ recognition of barriers associated with CGM use. They acknowledged that while CGM devices offer significant benefits, their use also involves challenges such as alarm inconvenience, sensor discomfort, broken sensors, and gaps in technology literacy. Multiple students mentioned concerns about alarms sounding at inconvenient times, such as *“during an exam”* or in the middle of the night. One student commented on *“nocturnal hypoglycemia... alerts that would wake [the student] up.”* These disruptions led some students to remove the sensor prior to completing the 8-day wear period: *“The alarm, which I could not shut off, was getting annoying/startling.”* Sensor discomfort was another issue raised by student responses. For example, one student noted, *“The feeling of a sensor on my arm when I showered or laid on my side was uncomfortable,”* while another mentioned that *“[the CGM] made [their] arm a little itchy where the adhesive was.”* Two students reported broken sensors and the inconvenience of replacing them, with one stating, *“Since the device broke, I would imagine the inconvenience of trying to replace it.”* Students mentioned concerns about technological issues, including issues pairing the sensor with the smartphone application. One student stated, *“My phone would lose access to the sensor,”* raising concerns about troubleshooting these problems. These responses captured the range of challenges that students encountered during their CGM wear experience.

Discussion

The objective of this study was to identify and evaluate themes related to self-perceived knowledge and empathy by incorporating a hands-on educational experience with a continuous glucose monitoring (CGM) device into an elective pharmacotherapy course at a school of pharmacy. The thematic analysis revealed that this experiential learning approach was perceived by students to increase their awareness of CGM technology while supporting their understanding of the challenges faced by individuals who use these devices. The four emerging themes from the responses included the role of empathy in shaping well-rounded healthcare providers, the recognition of CGM as a tool for patient empowerment, the complementary relationship between application-based learning and didactic curriculum, and the identification of potential barriers

to CGM adoption by patients. Collectively, these findings underscore the perceived value of experiential learning in pharmacy education. By directly engaging with CGM technology, students reported gaining insights into the lived experiences of patients managing diabetes, which may inform their future patient-centered communication. This study further highlights the potential for integrating similar wear-experiences across pharmacy curricula to support future pharmacists' ability to promote adherence, mitigate challenges, and improve health outcomes among patients utilising CGM devices.

The theme of "*Empathising with Patient Experiences Creates Well-Rounded Healthcare Providers*" emerged as students acknowledged feeling hesitant to assist patients with CGM, citing a lack of confidence and familiarity with the device. After CGM wear, students described feeling more comfortable assisting patients with CGM technology. This is valuable, as pharmacists are expected to be comfortable with CGM-related topics during patient encounters to improve health outcomes. Essentially, if a pharmacist finds the CGM device too complicated or intimidating, how can they expect patients to use it confidently and consistently to manage their diabetes effectively? This wear-experience allowed students to gain insight into the challenges faced by individuals with diabetes. By directly encountering discomfort, technological malfunctions, and adherence challenges, students gained personal experiences with CGM that they can reflect on during future counselling sessions as pharmacists. For instance, they can empathise by saying, "*When I had issues with a sensor, I tried rotating placement sites,*" fostering stronger connections with patients.

This experience not only supported their understanding of CGM's role in diabetes management but also increased their ability to anticipate patient-specific challenges. Together, these components strengthen their competence and readiness as future healthcare providers. In addition, this experience highlighted the importance of tailoring counseling to individual patient needs. Folz and authors (2024) similarly reported that pharmacy students who wore CGMs demonstrated greater confidence and counselling performance in simulated patient interactions, although empathy outcomes did not differ from controls (Folz et al., 2024). The reflections in our study align with these findings, as each student voiced concerns about different aspects of CGM wear that parallel challenges patients may encounter. This is particularly relevant given that pharmacists in certain practice settings, such as retail pharmacies in New Jersey, may be required to offer or provide counseling on CGM use. Since pharmacists are considered one of the most accessible healthcare

professionals, the ability to empathise during patient interactions is paramount in improving medication adherence, patient engagement, and overall health outcomes. This reflects the need for empathy-based training in pharmacy education, aligning with the evolving role of pharmacists in patient-centred care.

The theme of "*Awareness of CGM as a Patient Empowerment Tool*" demonstrated the potential of CGM devices to promote self-efficacy in managing blood glucose levels. Multiple students reported how real-time glucose monitoring influenced their dietary decisions, sparking behaviour modifications to optimise glucose control. These experiences align with existing literature demonstrating CGM's capacity to facilitate positive health behaviour changes among patients (Ehrhardt & Zaghal, 2020). By recognising the direct impact of behaviour on glycemic trends, students are well equipped to educate patients on the utility of CGM in promoting self-management and achieving personalised health goals, while appropriately controlling their diabetes. This finding demonstrates the importance of pharmacists taking an active role in patient education, bridging the gap between clinical guidance and patient autonomy. Furthermore, as over-the-counter CGM devices become more widely available across the United States, this study highlights the potential of CGM to promote lifestyle changes in individuals without diabetes or pre-diabetes. This is significant because students' first-hand experiences with glucose data usability can provide valuable insights into how CGM may support emerging health trends.

The theme of "*Application-based Learning Complements Didactic Curriculum*" emphasised the value of experiential learning in reinforcing theoretical knowledge. Students expressed that the CGM wear-experience allowed them to bridge the gap between classroom concepts and practical application, fostering a more comprehensive understanding of diabetes management. This finding aligns with adult learning theories, which emphasise active participation as critical for knowledge retention and skill development (Varman et al., 2021). The students' responses demonstrate how incorporating experiential components, like CGM wear, into pharmacy curricula can enhance students' readiness for clinical practice. By engaging with emerging healthcare technologies, students can gain hands-on experience with innovations that are rapidly reshaping patient care, improving their ability to apply theoretical knowledge in real-world, patient-centred contexts. This integration equips future pharmacists and healthcare providers with the practical skills and adaptability needed to navigate the evolving healthcare landscape and deliver more effective, patient-centred care.

The theme of “*Barriers to CGM Adoption*” highlighted challenges associated with CGM use from the students’ perspective, reflecting difficulties that patients may encounter with CGM. This includes disruptions from alarms, sensor discomfort, technological issues, and the inconvenience of replacing malfunctioning sensors. By experiencing and addressing these barriers, the students are now better equipped to approach patient counselling with a more practical, solution-focused mindset, knowing exactly which resources to consult for resolution. Overall, this experiential learning experience has the potential to enhance students’ ability to proactively address patient concerns, provide solutions, and advocate for CGM design improvements that prioritise user comfort and accessibility. By identifying these challenges, future pharmacists may be inspired to advocate for reducing financial, technological, and logistical barriers to CGM access.

This study has several strengths that contribute to filling the gap in the literature regarding the integration of CGM application-based learning into pharmacy education. By integrating both qualitative and quantitative data, the study captured a comprehensive understanding of student perspectives while emphasising the real-world applicability of experiential learning. The hands-on learning component addressed a critical gap in traditional pharmacy curricula by fostering empathy, practical knowledge, and patient-centred communication. Limitations of this study include its small sample size and single-institution design, which may limit generalisability. Adherence to continuous device wear could not be objectively confirmed, as it was not possible to verify whether students intentionally removed the CGM. This should be considered when interpreting the findings. In addition, the brief wear period precluded assessment of long-term impacts on student empathy. Finally, although the questionnaire was adapted from published instruments and reviewed for face validity, it was not formally validated.

The findings of this study suggest the potential value of integrating CGM wear-experiences into pharmacy education to support empathetic, patient-centred care. By enhancing students’ understanding of real-world challenges associated with diabetes management, this educational intervention may inform pharmacist-led counselling and clinical care. Embedding CGM experiences into earlier didactic courses or expanding their use across healthcare disciplines could further reinforce the educational relevance of this teaching strategy. Ultimately, the integration of application-based learning into pharmacy education may help bridge the gap between theory and practice and encourage more compassionate and informed approaches to patient care.

At AUHS School of Pharmacy, FCEs are triangulated with other assessment measures—including learning outcomes mapping, embedded assessments, curriculum reviews, and AACP surveys—so that student feedback is interpreted within multiple evidence streams. Applying a CLT lens to these comments has provided faculty with clearer insight into how their teaching practices influence intrinsic, extraneous, and germane load. These insights have been incorporated into faculty workshops to foster reflective practice and guide strategies that minimise cognitive overload and enhance student learning. Over the past four years, this approach has contributed to tangible curricular reforms, including credit-hour realignment, content streamlining to reduce overload, and the introduction of practice-readiness and licensure preparation courses (Islam & Yang, 2023).

Table III presents a framework of best teaching practices grounded in CLT, outlining strategies to manage intrinsic load, reduce extraneous load, and enhance germane load. Mapping student evaluations to CLT constructs provides a feasible strategy to detect when instructional design may inadvertently increase extraneous load (e.g., disorganised delivery, unclear expectations, excessive content density, rapid pacing). Conversely, identifying comments aligned with germane load helps educators recognise when students are engaging in deeper schema construction. Embedding CLT-informed coding into routine course review can therefore function as an early warning system—highlighting instructional practices that compromise learning efficiency while reinforcing those that promote effective learning.

This study has several limitations. First, the data were collected from a single institution, which may not capture the diversity of institutional cultures, student demographics, and instructional methods across different settings. Additionally, the reliance on self-reported FCE data introduces inherent subjectivity. The study period also spans the COVID-19 era, during which shifts in instructional modality, assessment practices, and student stressors may have influenced the tone and content of evaluations. Although three investigators independently coded using an a priori CLT-informed codebook, no formal inter-rater reliability statistics were calculated; consensus was instead reached through discussion, which enhances trustworthiness but limits reproducibility. Because the same students often evaluated multiple courses, repeated measures may have influenced code frequencies, meaning results should be interpreted as descriptive patterns rather than independent observations. Finally, the analysis does not provide a direct measure of cognitive load but interprets student perceptions through the lens of CLT constructs, serving

as an applied theoretical framework rather than a validated instrument. Despite these limitations, the dataset offers unique longitudinal insights into student learning experiences in an accelerated PharmD programme and highlights opportunities for future studies to integrate perception-based analyses with validated CLT measures and more diverse institutional contexts.

Conclusion

This study demonstrated the educational value of incorporating a CGM student-wear experience into an advanced pharmacotherapy elective course for pharmacy students. The findings suggest that students perceived a hands-on CGM wear experience as helpful for increasing their awareness of empathy-related considerations, CGM use, and counseling needs, which may support their preparation for future patient care. Overall, implementing CGM wear experiences earlier in the curriculum has the potential to strengthen foundational knowledge and empathy, fostering a patient-centred approach to diabetes management throughout their clinical training. Future research should include larger, multi-institutional cohorts, validated survey instruments, and longer follow-up to better assess the sustained impact of CGM student-wear experiences.

Conflict of interest

Maria Leibfried is an employee of Pfizer, Inc.

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